



SEQUENCE LISTING

#13

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TKACHENKO, Alex  
ZHOU, Xianjin

<120> HMGI PROTEINS IN CANCER AND OBESITY

<130> 54615.8001.US02

<140> US 08/852,666

<141> 1997-05-07

<150> US 08/679,529

<151> 1996-07-12

<160> 54

<170> PatentIn version 3.1

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1 5 10 15

Xaa Xaa Lys Ala Tyr His Pro His Cys Phe Thr Cys Val Met Cys His  
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Arg Ser Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Ile  
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His Cys Ile Glu Asp Phe  
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<210> 8  
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<220>  
<223> A novel sequence fused to the DNA binding domains of HMGI-C which encodes transcriptional regulatory domains:zyxin

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1 5 10 15

Xaa Xaa Asn Ser Tyr His Pro Gln Cys Phe Thr Cys Val Met Cys His  
20 25 30

Thr Pro Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gln Pro  
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His Cys Val Asp Asp Tyr  
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1 5 10 15

Xaa Xaa Xaa Lys Arg Trp His Ala Ser Cys Leu Lys Cys Tyr Ala Cys

20 25 30

Arg Gln Pro Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asn  
35 40 45

Ile Tyr Cys Lys Asn Asp Tyr  
50 55

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<220>  
<223> A novel sequence fused to the DNA binding domains of HMGI-C which  
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1 5 10 15

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20 25 30

Lys Leu Asn Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ser  
35 40 45

Ile Tyr Cys Lys Glu Asp Tyr  
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<212> PRT  
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<220>  
<223> A novel sequence fused to the DNA binding domains of HMGI-C which  
encodes transcriptional regulatory domains: Lin-11

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1 5 10 15

Xaa Xaa Xaa Lys Cys Trp His Gln Ser Cys Leu Arg Cys Cys Asp Cys  
20 25 30

Arg Ala Pro Met Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Ile Leu  
35 40 45

Cys Lys Thr Asp Phe  
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<210> 12  
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<212> PRT  
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1 5 10 15

Xaa Xaa Xaa Lys Tyr Trp His Glu Asp Cys Leu Lys Cys Ala Cys Cys  
20 25 30

Asp Cys Arg Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
35 40 45

Leu Ile Leu Cys Arg Arg Asp Tyr  
50 55

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1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ser Arg Phe His Val His Cys Tyr  
20 25 30

Arg Cys Glu Asp Cys Gly Gly Leu Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa His Ile Leu Cys Lys Thr Cys Asn  
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<210> 14  
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<220>  
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1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Lys Asn Phe His Met Lys Cys  
20 25 30

Tyr Lys Cys Glu Asp Cys Gly Arg Pro Leu Xaa Xaa Xaa Xaa Xaa Xaa  
35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa His Val Leu Cys Met Lys Cys His  
50 55 60

<210> 15  
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<220>  
<223> A novel sequence fused to the DNA binding domains of HMGI-C which  
encodes transcriptional regulatory domains: apterous

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<223> 11 unspecified amino acids between the two sequences

<400> 15

Arg Cys Ser Arg Cys Leu Ala Ser Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10 15



Xaa Xaa Xaa Xaa Leu Val Phe His Val Asn Cys Phe Cys Cys Thr Val  
20 25 30

Cys His Pro Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu  
35 40 45

Ile Tyr Cys Arg Thr His Tyr  
50 55

<210> 16

<211> 56

<212> PRT

<213> Artificial Sequence

<220>

<223> A novel sequence fused to the DNA binding domains of HMGI-C which  
encodes transcriptional regulatory domains: Lh2

<220>

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<222> (10)..(20)

<223> 11 unspecified amino acids between the two sequences

<220>

<221> MISC\_FEATURE

<222> (38)..(48)

<223> 11 unspecified amino acids between the two sequences

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Arg Cys Ala Arg Cys His Leu Gly Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

Xaa Xaa Xaa Xaa Leu Val Tyr His Asn Leu Cys Phe Thr Cys Cys Thr  
20 25 30

Thr Cys Asn Met Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
35 40 45

Leu Val Tyr Cys Arg Leu His Phe  
50 55

<210> 17

<211> 57

<212> PRT

<213> Artificial Sequence

<220>

<223> A novel sequence fused to the DNA binding domains of HMGI-C which encodes transcriptional regulatory domains: Lin-11

<220>

<221> MISC\_FEATURE

<222> (10)..(20)

<223> 11 unspecified amino acids between the two sequences

<220>

<221> MISC\_FEATURE

<222> (38)..(49)

<223> 12 unspecified amino acids between the two sequences

<400> 17

Arg Cys Ala Gly Cys Asp Gly Lys Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

Xaa Xaa Xaa Xaa Lys Val Phe His Ile Arg Cys Phe Gln Cys Ser Val  
20 25 30

Cys Gln Arg Leu Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
35 40 45

Xaa Arg Phe Val Cys Gln Ser Asp Phe  
50 55

<210> 18

<211> 56

<212> PRT

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<220>

<223> A novel sequence fused to the DNA binding domains of HMGI-C which encodes transcriptional regulatory domains: RBTN-1

<220>

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<222> (10)..(20)

<223> 11 unspecified amino acids between the two sequences

<220>

<221> MISC\_FEATURE

<222> (38)..(49)

<223> 12 unspecified amino acids between the two sequences

<400> 18

Asn Cys Ala Ala Cys Ser Lys Leu Ile Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

Xaa Xaa Xaa Xaa Asn Val Tyr His Leu Asp Cys Phe Ala Cys Gln Leu  
20 25 30

Cys Asn Gln Arg Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
35 40 45

Xaa Ile Leu Cys Gln Met Asp Tyr  
50 55

<210> 19  
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<223> consensus residues

<220>  
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<222> (2)..(3)  
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Cys Xaa Xaa Cys  
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<210> 20  
<211> 10  
<212> PRT  
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<220>  
<223> consensus sequence of novel sequence fused to the DNA binding  
domains of HMGI-C

<220>  
<221> MISC\_FEATURE  
<222> (2)..(9)  
<223> The letter "X", or protein "Xaa", indicates any amino acid between  
the consensus residues (which in this case are histidine and  
cysteine)

<400> 20

His Xaa Xaa Cys Xaa Xaa Cys Xaa Xaa Cys  
1 5 10

<210> 21  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> consensus residues

<220>  
<221> MISC\_FEATURE  
<222> (2)..(3)  
<223> 2 unspecified amino acids between consensus residues

<400> 21

Cys Xaa Xaa His  
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<210> 22  
<211> 45  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Potential transactivation acidic domain encoded by the sequence  
derived from chromosome 15 in ST90-375

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Glu Glu Glu Glu His Leu Asn Thr Glu Arg Ser Ser Ala Gly Gly Gly  
1 5 10 15

Trp Arg Gly Val Gln Pro Leu Gly Ser Pro Thr Pro Gly Glu Asp His  
20 25 30

Arg Pro Ile Pro Ser Pro Ala Ser Gly Phe Pro Ser Ile  
35 40 45

<210> 23  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Sense primer used to screen for obese mutation

<400> 23  
cattctgagt ttgtccaaga tgc

23

<210> 24  
<211> 20  
<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense primer used to screen for obese mutation

<400> 24

ggtctgaggc agggagcagc

20

<210> 25

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Specific oligonucleotide primer synthesized and used to screen a human total genomic YAC library by the PCT-based method

<400> 25

aggggacaac aaatgcccac agg

23

<210> 26

<211> 25

<212> DNA

<213> Artificial sequence

<220>

<223> Specific oligonucleotide primer synthesized and used to screen a human total genomic YAC library by the PCT-based method

<400> 26

cgtcaccagg gacagtttca cttgg

25

<210> 27

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Anchored oligo-dT primer used to synthesize first strand cDNA

<400> 27

gcaatacgac tcactatagt tttttttttt tt

32

<210> 28

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> HMGI-C exon 1 sense primer used in first round of 3' RACE

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19

<210> 29  
<211> 19  
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<223> antisense adapter primer used in first round of 3' RACE  
  
<400> 29  
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<210> 30  
<211> 19  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> a nested HMGI-C sense primer spanning exon 1 and 2 used to  
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<400> 30  
ggaagcagca gcaagaacc 19

<210> 31  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
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<223> primer 375 for performing reverse transcription for the detection  
of chimeric transcripts using novel sequence-specific primers  
  
<400> 31  
cttctttctc tgccgcatcg 20

<210> 32  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> primer 724 for performing reverse transcription for the detection  
of chimeric transcripts using novel sequence-specific primers  
  
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gtgaggatga taggccttcc 20

<210> 33  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>

<223> Primer for the novel sequence derived from the chimeric transcript  
obtained from lipoma ST90-375

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cagaagcaga ccagcaaacc 20

<210> 34  
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<212> DNA  
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<220>  
<223> Primer for the novel sequence derived from the chimeric transcript  
obtained from lipoma ST90-375

<400> 34  
cttctttctc tgccgcatcg 20

<210> 35  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer for the novel sequence derived from the chimeric transcript  
obtained from lipoma ST93-724

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ctctggagca gtgcaatgtg 20

<210> 36  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer for the novel sequence derived from the chimeric transcript  
obtained from lipoma ST93-724

<400> 36  
gtgaggatga taggccttcc 20

<210> 37  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> first strand cDNA synthesis with primer 1

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atgaattcct aatcctcctc tgc 23

<210> 38  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> PCR amplification with primers 1 and 2

<400> 38  
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23

<210> 39  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> 21-mer oligonucleotide complementary to the human HMGI-C mRNA  
transcript beginning with the translation initiation codon

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21

<210> 40  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> 20-mer oligonucleotide complementary to the human HMGI-C mRNA  
transcript beginning with the translation initiation codon

<400> 40  
ccctcacgc gtgcgctcat

20

<210> 41  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> 19-mer oligonucleotide complementary to the human HMGI-C mRNA  
transcript beginning with the translation initiation codon

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19

<210> 42  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> 18-mer oligonucleotide complementary to the human HMGI-C mRNA



transcript beginning with the translation initiation codon

<400> 42  
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<210> 43  
<211> 17  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> 17-mer oligonucleotide complementary to the human HMGI-C mRNA  
transcript beginning with the translation initiation codon

<400> 43  
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<210> 44  
<211> 16  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> 16-mer oligonucleotide complementary to the human HMGI-C mRNA  
transcript beginning with the translation initiation codon

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<210> 45  
<211> 15  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> 15-mer oligonucleotide complementary to the human HMGI-C mRNA  
transcript beginning with the translation initiation codon

<400> 45  
accgcgtgcg ctcac 15

<210> 46  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> 21-mer oligonucleotide complementary to the human HMGI(Y) mRNA  
transcript beginning with the translation initiation codon

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<210> 47  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> 20-mer oligonucleotide complementary to the human HMGI(Y) mRNA  
transcript beginning with the translation initiation codon  
  
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<210> 48  
<211> 19  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> 19-mer oligonucleotide complementary to the human HMGI(Y) mRNA  
transcript beginning with the translation initiation codon  
  
<400> 48  
tcgagctcga ctactcat 19  
  
<210> 49  
<211> 17  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> 17-mer oligonucleotide complementary to the human HMGI(Y) mRNA  
transcript beginning with the translation initiation codon  
  
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cgagctcgac tcatcat 17  
  
<210> 50  
<211> 17  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> 17-mer oligonucleotide complementary to the human HMGI(Y) mRNA  
transcript beginning with the translation initiation codon  
  
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<210> 51  
<211> 16  
<212> DNA  
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<220>

<223> 16-mer oligonucleotide complementary to the human HMGI(Y) mRNA  
transcript beginning with the translation initiation codon

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<210> 52  
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<212> DNA  
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<220>  
<223> 15-mer oligonucleotide complementary to the human HMGI(Y) mRNA  
transcript beginning with the translation initiation codon

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<210> 53  
<211> 11  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> consensus sequence for HMGI DNA-binding domains

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Thr Pro Lys Arg Pro Arg Gly Arg Pro Lys Lys  
1 5 10

<210> 54  
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<212> PRT  
<213> Artificial Sequence

<220>  
<223> consensus sequence for HMGI DNA-binding domains

<400> 54  
Pro Arg Gly Arg Pro Lys Gly Ser Lys Asn Lys  
1 5 10